

Applicant : T. Georgiev
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REMARKS

Comments of the applicant below are preceded by related comments of the examiner in small bold-faced type.

Claims 1-3, 10-11, 13-18, 25-26, 28-32, 34-35 and 37-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Thomas et al. (ACM, Nov 1995).

5. As per claim 1, Thomas et al., hereinafter Thomas, discloses a method comprising:
in response to user action on a canvas, selecting at least one area of a first image which relates to an area on a distortion grid (Figure 3 where a corner of the object is grabbed for scaling);
using a plurality of points local to the at least one area to calculate a distortion local to the area (Figure 3 where the area close to the selected corner is distorted; the distortion is not limited to one point but to a plurality of points local to the area);
extracting at least one component of the distortion (the scaling factor for Figure 3);
and
applying the at least one component to a second area of the first image (Figure 3 where the other corners are also distorted).

In a telephone interview on March 9, 2004, with Examiner Ryan Yang, the applicant's representatives, David Feigenbaum and Mandy Jubang, discussed claim 1 and the Thomas reference. The applicant's representatives pointed out that, although Figure 3 of Thomas and the related text describe a distorted scaling operation in which all four corners of a rectangle are simultaneously under the control of a mouse when one corner is dragged by a user of the mouse, those portions of Thomas neither disclose nor suggest the detail of how the distorted scaling operation is to be applied. Thus, Thomas neither discloses nor suggests the existence of a distortion grid, or that an area of a first image relates to such a grid, or that there be a calculation of a distortion, or that points local to the dragged corner be used in such a calculation. Nor does Thomas disclose or suggest the existence of a "component of the distortion" or that such a component be "extracted". And Thomas does not disclose or suggest that it is such a component that is to be applied to a second area of an image. The examiner indicated that he would need to

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study Thomas and the claims to evaluate the applicant's position and suggested that the applicant submit a formal reply.

The portions of Thomas cited by the examiner do not disclose and would not have made obvious a distortion grid. An example of a distortion grid, discussed in the applicant's specification, is:

... a grid of vectors ... with each vector corresponding to a single point in an image. The vectors indicate how the image is modified to obtain the original undistorted source image. [Applicant's specification, page 1, lines 11-15]

FIG. 1 shows an image 10 with a pixel 12. The image may be thought of as being associated with zero distortion vectors (representing no distortion). FIG. 1 further shows a distortion grid, of the same size as the image, but having non-zero distortion vectors 14, 16, 18 in the grid. At each point these vectors represent the sum of the distortions applied to the image. FIG. 2 shows an original image 30 and a distorted image (warped) image 32. The distorted image may have been created by dragging portions of the head and neck upward and to the right and rotating parts of the body... It is not so important to know exactly how the distortion was created, but rather to note that the distortion at any point in the image may be viewed locally as a combination of a translation and a linear transform. [Applicant's specification, page 4, lines 7-17]

Thomas does not disclose or suggest a distortion grid as required in claim 1.

Thomas also does not disclose a distortion having components, much less extracting at least one component of the distortion from a user-selected area of an image. The applicant's specification describes one example of an extraction of a component of a distortion as follows:

Suppose a user wishes to obtain just the rotational component of the distortion at one area of the distorted image. FIG. 3 shows a sample menu selection screen 34 that a user can employ to select just the desired elements of a warping, in this case selecting only the rotation 36. Other selectable elements shown include translation 37 and vertical skew 38. Other menu items are available. Having selected the desired elements of a distortion, the user can cause the mouse cursor to hover over the area of the distorted image from which the user desires to draw the selected distortion components. Clicking the mouse at that point causes the selected components of the distortion in the area of that point to be extracted. [Applicant's specification, page 4, lines 18-26]

The examiner has failed to identify where Thomas discloses or suggests a distortion having components, much less extracting at least one component of the distortion, as required in claim 1.

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For at least these reasons, claim 1 and the claims that depend on it are patentable.

Independent claim 16 is patentable for at least some of the same reasons given with respect to claim 1.

Turning to independent claim 31, as discussed with respect to claim 1, Thomas does not disclose and would not have made obvious a distortion grid. Also, Thomas does not disclose a distortion having components, much less extracting at least one component of a distortion from an area of an image in response to a selection by a user from a menu.

For at least these reasons, claim 31 and the claims that depend on it are patentable.

45. Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The applicant acknowledges the examiner's indication that claims 7-9 are patentable.

All of the dependent claims are patentable for at least the same reasons as the claims on which they depend.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

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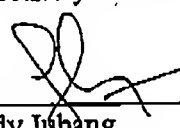
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Respectfully submitted,

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4/15/04



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